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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Fabrice LETERTRE et al.

Confirmation No.: 4652

Patent No.: 7,008,859 B2

Application No.: 10/678,127

Patent Date: March 7, 2006

Filing Date: October 6, 2003

For: WAFER AND METHOD OF PRODUCING
A SUBSTRATE BY TRANSFER OF A
LAYER THAT INCLUDES FOREIGN
SPECIES

Attorney Docket No.: 4717-7400

REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 C.F.R. § 1.323

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Certificate
MAR 28 2006
of Correction

Sir:

Patentees hereby respectfully request the issuance of a Certificate of Correction in connection with the above-identified patent. The corrections are listed on the attached Form PTO-1050. The corrections requested are as follows:

Title Page:

Item (56) References Cited, Other Publications:

"Jalaguier et al." reference, delete "May, 1999" and insert -- 11th International Conference on Indium Phosphide and Related Materials, 16-20 May 1999 --.

"R. Fornari et al." reference, delete "1997", and insert -- Materials Science and Engineering B44 (1997) 233-237 --.

"A. Näser et al." reference, after "A. Näser" change "et al." to -- et al. --; and delete "1995" and insert -- Appl. Phys. Lett., Vol. 67, No. 4, 479-481 (1995) --.

The requested changes are to correct errors of a clerical or typographical nature and do not involve changes that would constitute new matter or require reexamination.

93/27/2006 NREYEH1 00000026 501814 7008859
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MAR 29 2006

A fee of \$100 is believed to be due for this request. Please charge the required fees to Winston & Strawn LLP Deposit Account No. 50-1814. Please issue a Certificate of Correction in due course.

Respectfully submitted,

3-23-06

Date

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212-294-3311

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

PATENT NO.: 7,008,859 B2
DATED: March 7, 2006
INVENTORS: Letertre et al.

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

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(12) **United States Patent**
Letertre et al.

(10) **Patent No.:** **US 7,008,859 B2**
 (45) **Date of Patent:** **Mar. 7, 2006**

(54) **WAFER AND METHOD OF PRODUCING A SUBSTRATE BY TRANSFER OF A LAYER THAT INCLUDES FOREIGN SPECIES**

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OTHER PUBLICATIONS

Jalaguier et al., "Transfer of thin InP films onto silicon substrate by proton implantation process," (May, 1999) *see #1*
 R. Fornari et al., "Homogeneity of thermally annealed Fe-doped InP wafers," (1997) *see #2*
 A. Naser et al., "Thermal stability of the midgap acceptor rhodium in indium phosphide" (1995) *et al. see #3*

* cited by examiner

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 66 days.

(21) Appl. No.: **10/678,127**

(22) Filed: **Oct. 6, 2003**

(65) **Prior Publication Data**

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(30) **Foreign Application Priority Data**

Oct. 7, 2002 (FR) 02 12405

(51) **Int. Cl.**

H01L 21/30 (2006.01)

H01L 21/20 (2006.01)

(52) **U.S. Cl.** **438/459; 438/458; 438/479; 438/542**

(58) **Field of Classification Search** **438/459, 438/458, 455, 528, 478, 542; 148/DIG. 12**
 See application file for complete search history.

(56) **References Cited**

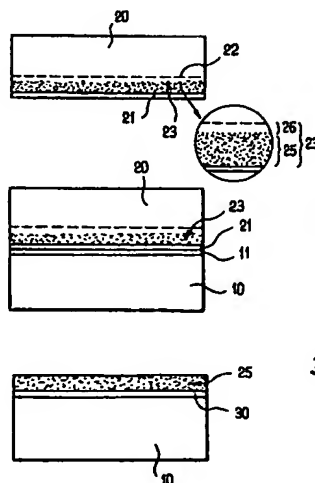
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(57) **ABSTRACT**

A method of producing a substrate that has a transfer crystalline layer transferred from a donor wafer onto a support. The transfer layer can include one or more foreign species to modify its properties. In the preferred embodiment an atomic species is implanted into a zone of the donor wafer that is substantially free of foreign species to form an embrittlement or weakened zone below a bonding face thereof, with the weakened zone and the bonding face delimiting a transfer layer to be transferred. The donor wafer is preferably then bonded at the level of its bonding face to a support. Stresses are then preferably applied to produce a cleavage in the region of the weakened zone to obtain a substrate that includes the support and the transfer layer. Foreign species are preferably diffused into the thickness of the transfer layer prior to implantation or after cleavage to modify the properties of the transfer layer, preferably its electrical or optical properties. The preferred embodiment produces substrates with a thin InP layer rendered semi-insulating by iron diffusion.

19 Claims, 4 Drawing Sheets



1. 11th International Conference on Indium Phosphide and Related Materials, 16-20 May 1999

2. Materials Science and Engineering B44 (1997) 233-237

3. Appl. Phys. Lett., Vol. 67, No. 4, 479-481 (1995)

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